Project:	YPSI FOOD COOPERATIVE SOLAR SYSTEM INSTALL	Computed:	Date:
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INITIAL SKETCH PACKAGE FOR SOLAR PV SYSTEM INSTALLATION AT YPSI FOOD COOPERATIVE 308 Nº RIVER ROAD, YPSILANTI

ISSUED FOR MATERIAL PROCUREMENT 8/16/2010
(SEE PG. 17)

ISSUED FOR BUILDING PERMIT SUPPORT 8/28/2010
(C.J. HOOKHAM, MICHIGAN PROFESSIONAL ENGINEER No. 34897)

YASI FOOD COOPERATIVE

Project:	SOLAR SYSTEM INSTALLATION	Computed:	Date:
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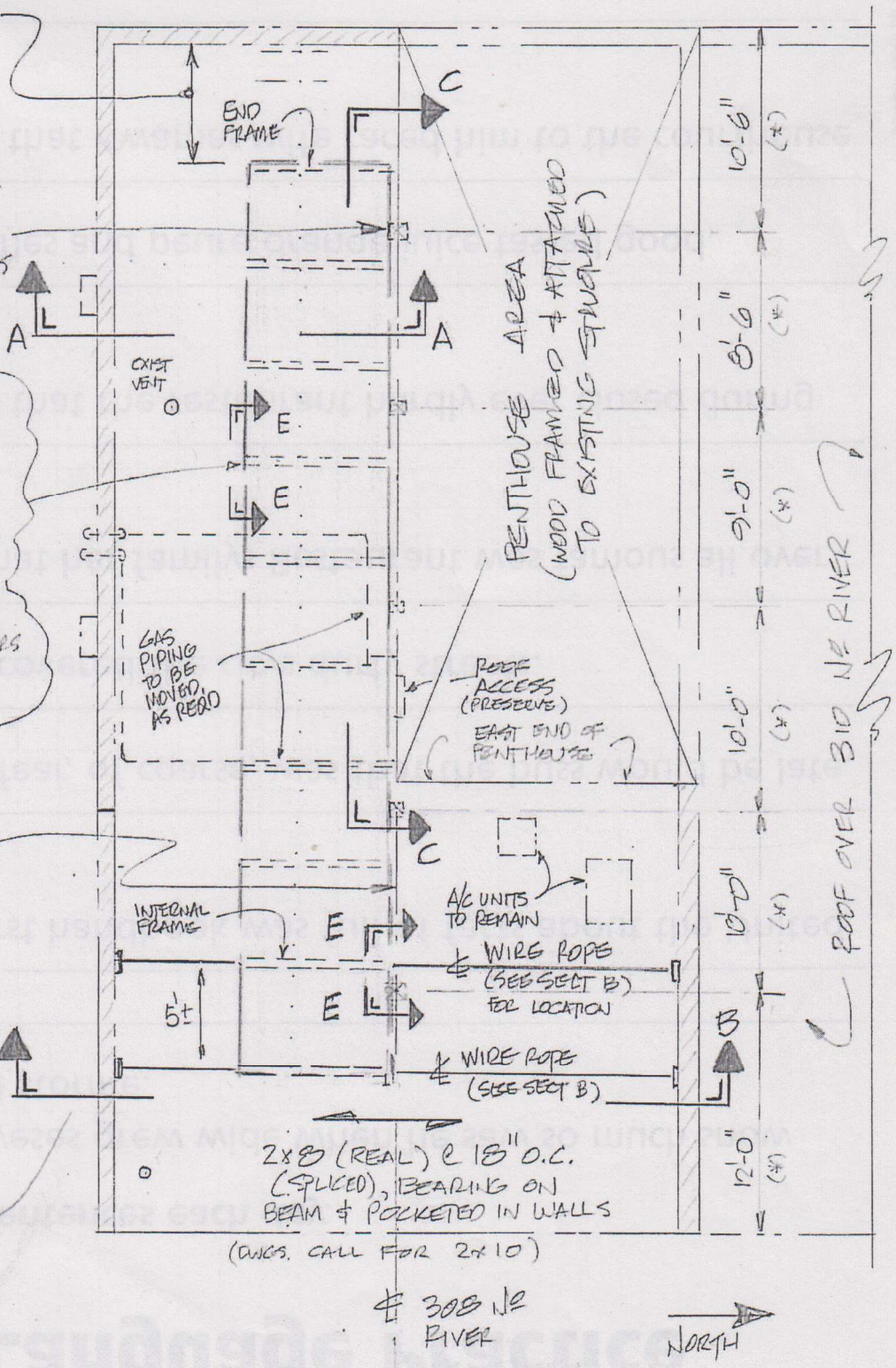
SEE PG. 11 FOR SECTIONS



* DIMS. SCALED FROM DWG. A-1 MACMULLEN & ASSOC.

YPSI FEED COOPERATIVE

Project:	SOLAR SYSTEM INSTALL	Computed:	Date:
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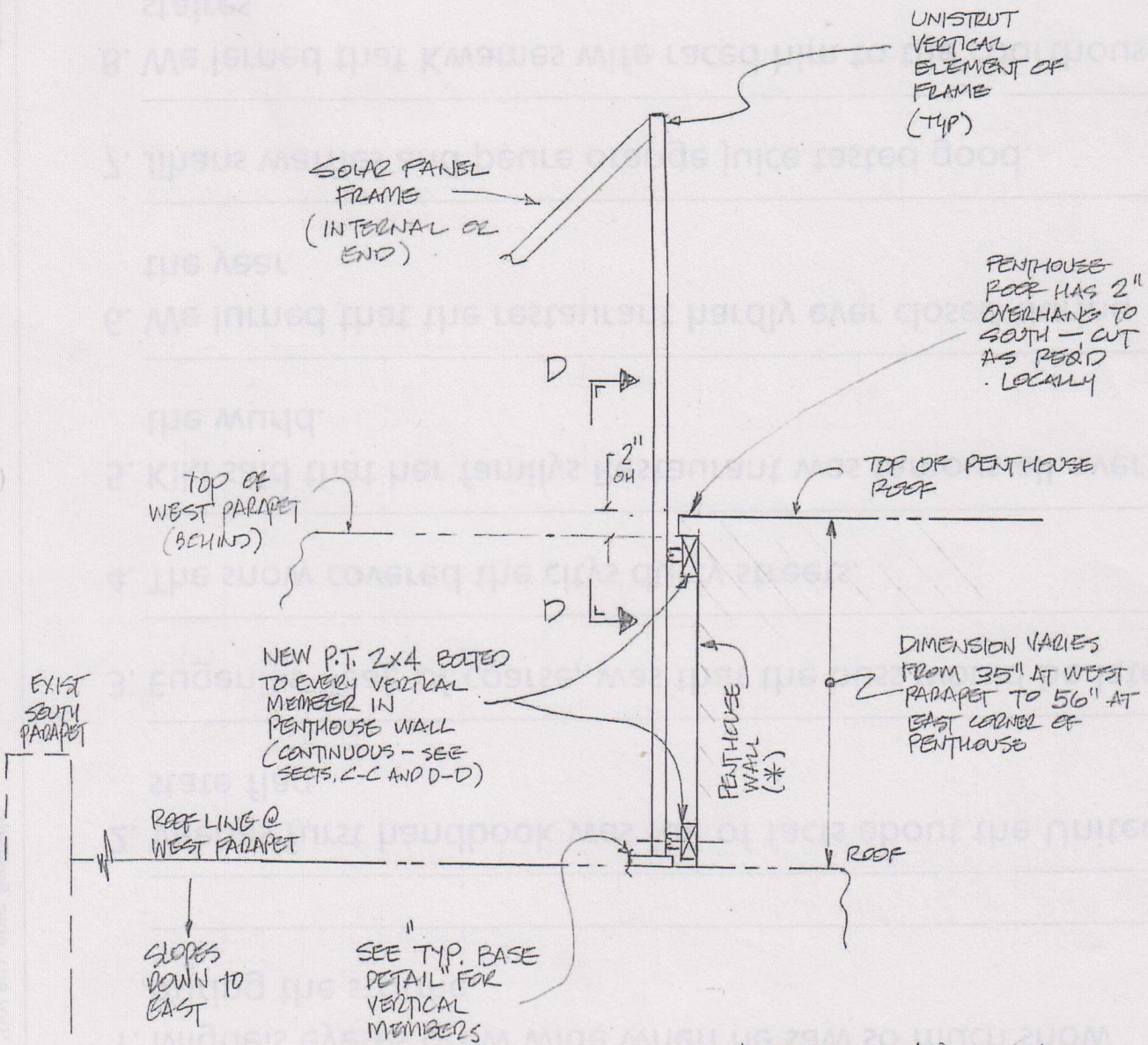
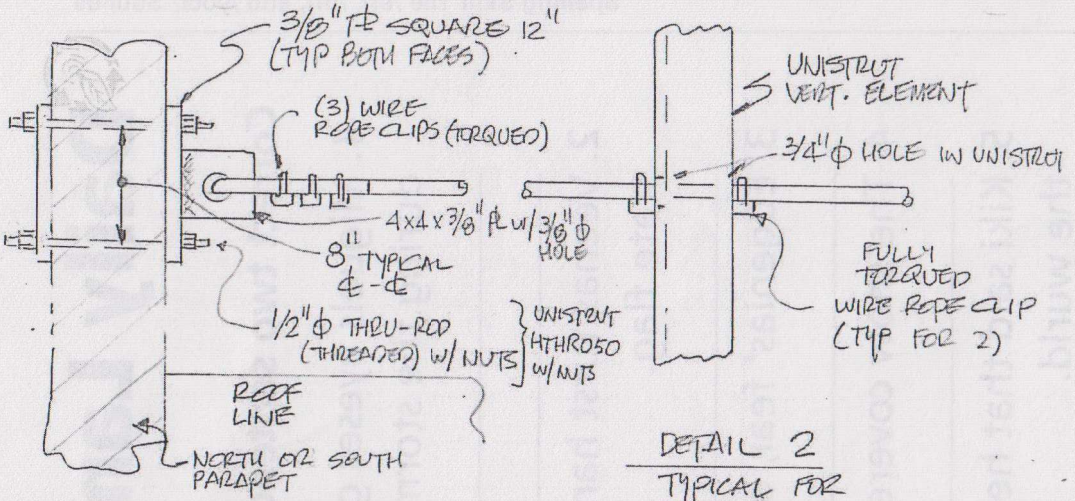


A TOTAL OF (7) OF (10) PV SUPPORT FRAMES WILL BE ANCHORED FROM PENTHOUSE FRAMING PER DETAILS IN THIS SECTION IF SYSTEM IS PLACED 6' EAST OF WEST PARAPET

SECTION A-A

(PAGE 6 - PLAN) (LOOKING WEST)

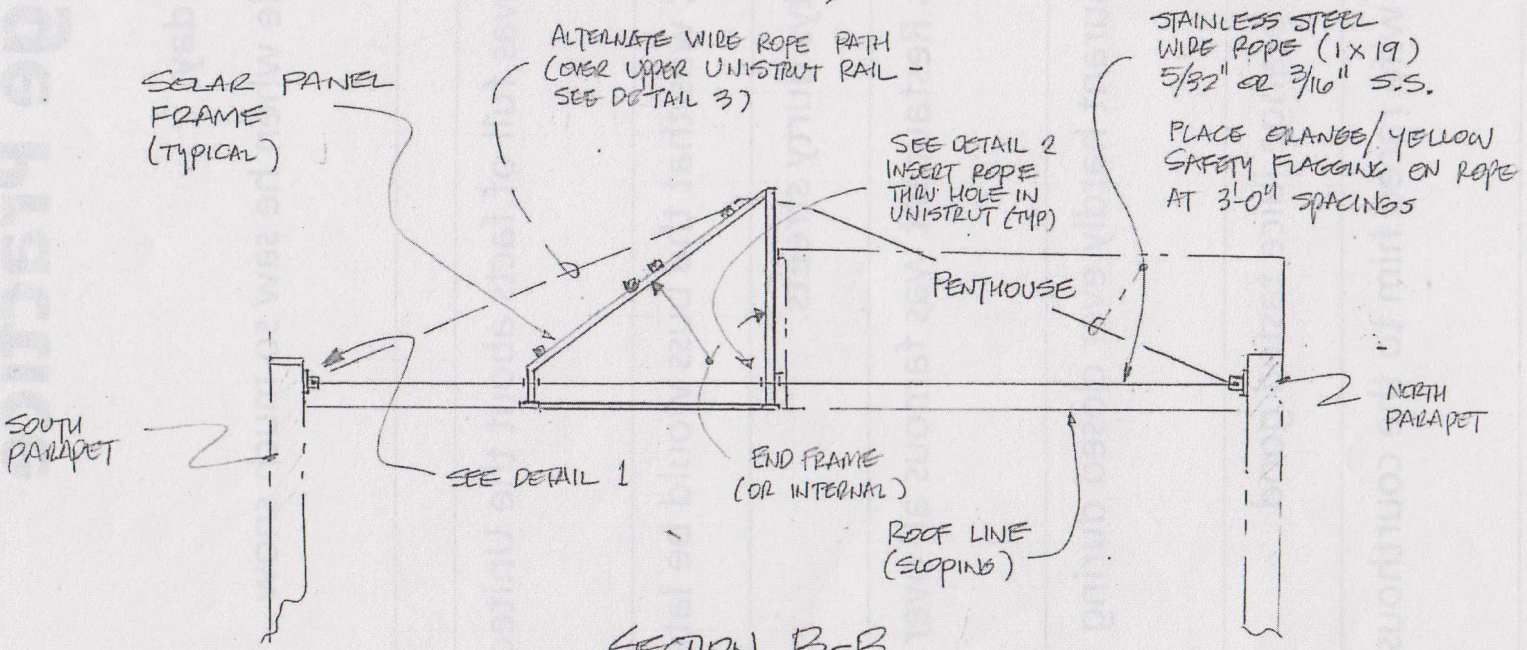


DETAIL 1
TYPICAL FOR (4) PLACES

DETAIL 2
TYPICAL FOR (4) PLACES

A TOTAL OF (3) OF (10) PV SUPPORT FRAMES WILL BE EAST OF THE PENTHOUSE. LATERAL STABILITY WILL BE MAINTAINED VIA HARDWARE SCHEME NOTED BELOW USING WIRE ROPE

PREFERRED LOCATION OF WIRE ROPE BRACES IS AT THE (2) EASTERN FRAMES AS SHOWN. ALTERNATE WIRE ROPE BRACE INSTALLED BETWEEN SOLAR PANELS – SEE DETAIL 3



SECTION B-B
WIRE ROPE BRACES - SEE PLAN PG. 6

YPSI FOOD COOPERATIVE
SOLAR SYSTEM INSTALL

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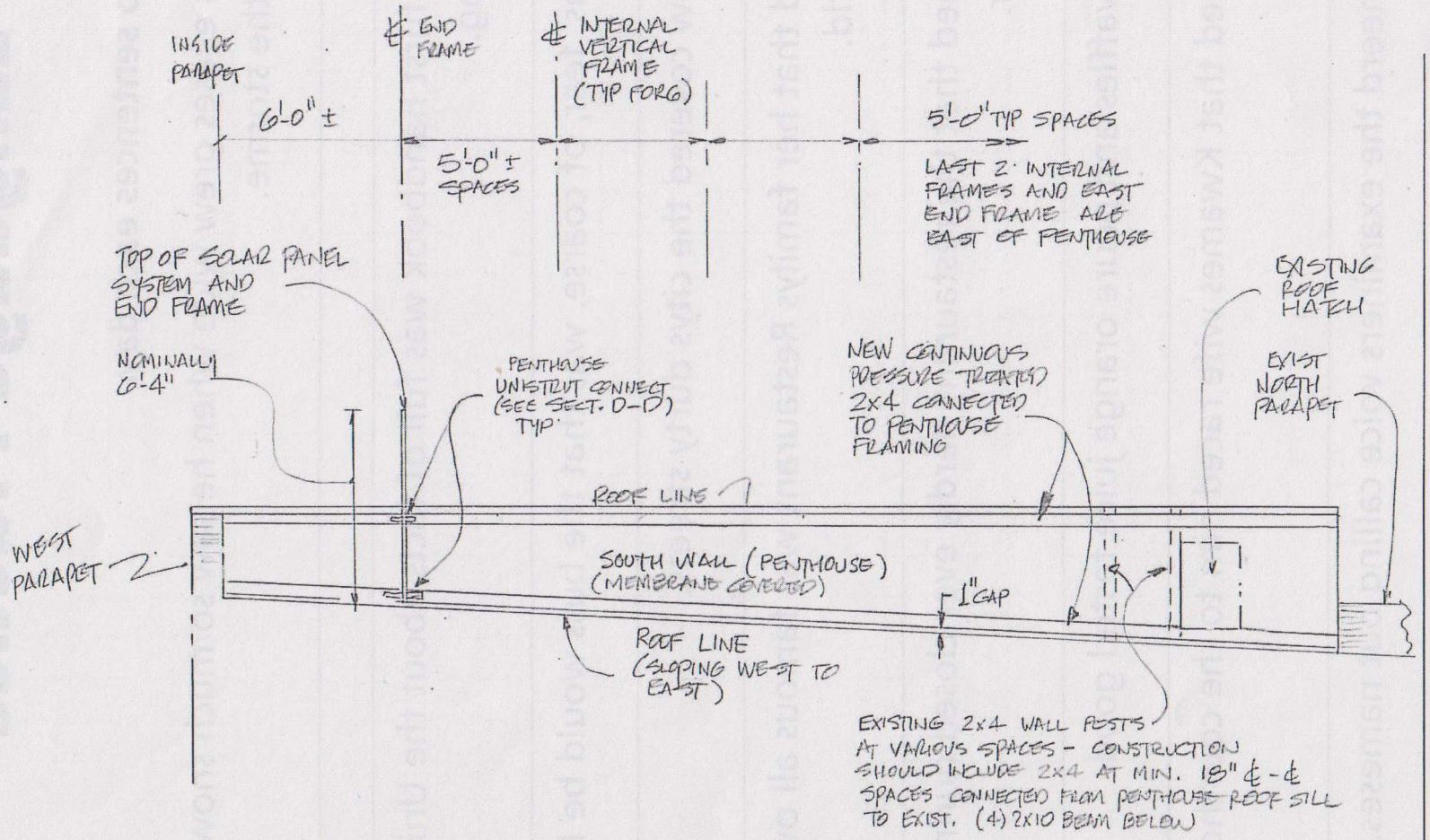
END AND INTERNAL FRAMES TO BE INSTALLED EITHER PLUMB OR PERPINDICULAR TO ROOF (TYPICAL)



SECTION C-C LOOKING NORTH AT PENT HOUSE

YPSI FOOD COOPERATIVE

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YPSI FOOD COOPERATIVE

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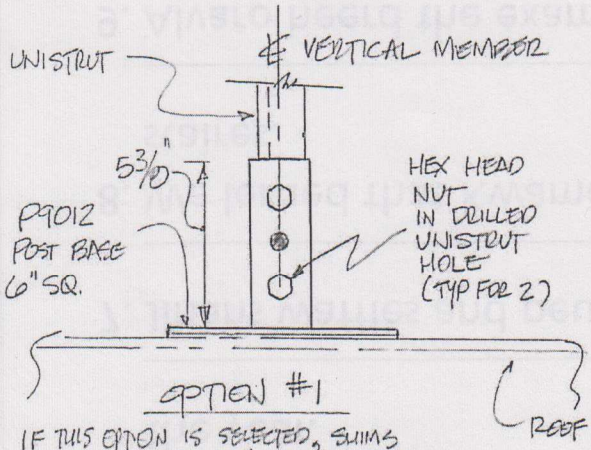
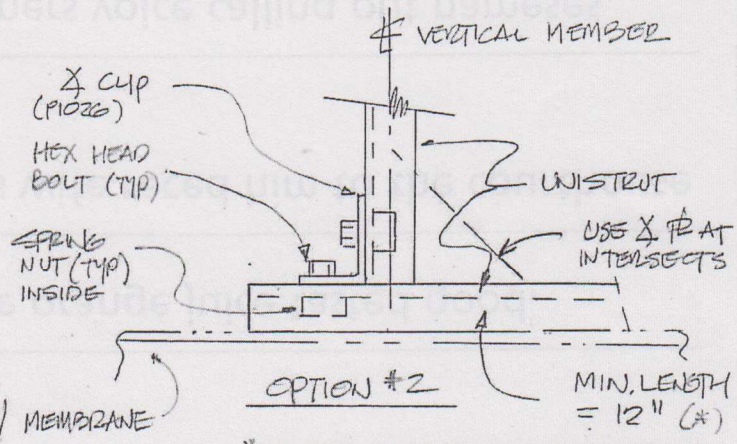
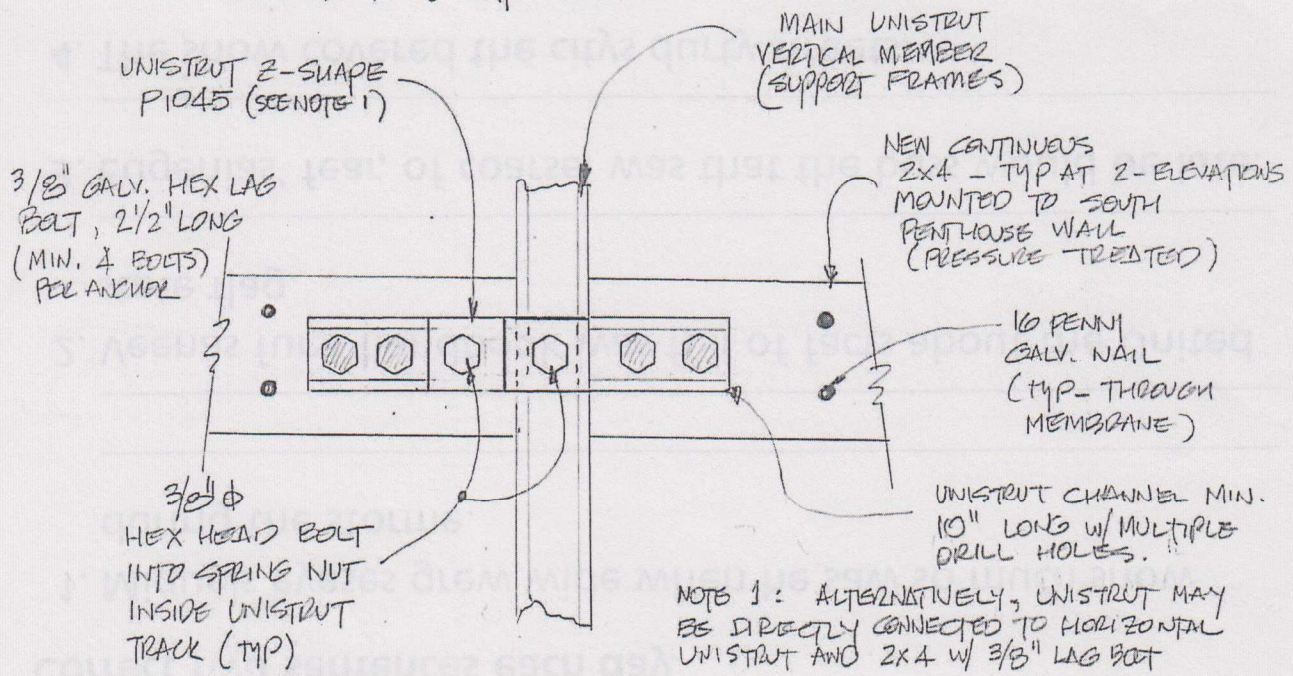




TYPICAL BASE DETAIL
(OPTION #2 PREFERRED)

* BOTTOM UNISTRUT UNDER VERTICAL UNISTRUTS PREFERRED FOR BASE OVER SHORT, UNCONNECTED PIECES

THE SELECTED BASE MUST BE ABLE TO ACCEPT SOME ADDITIONAL DEAD WEIGHT TO COUNTERACT WIND-BASED UPLIFT AT EACH VERTICAL LEG (FRONT & BACK). USE SPARE MEMBRANE PIECES UNDER BASE MATERIALS.



NOTE 1: ALTERNATIVELY, UNISTRUT MAY BE DIRECTLY CONNECTED TO HORIZONTAL UNISTRUT AND 2x4 W/ 3/8" LAG BOLT

SECTION D-D

(ANCHORAGE OF VERTICAL ELEMENTS)
SEE SECT. A-A

YPSI FOOD COOPERATIVE

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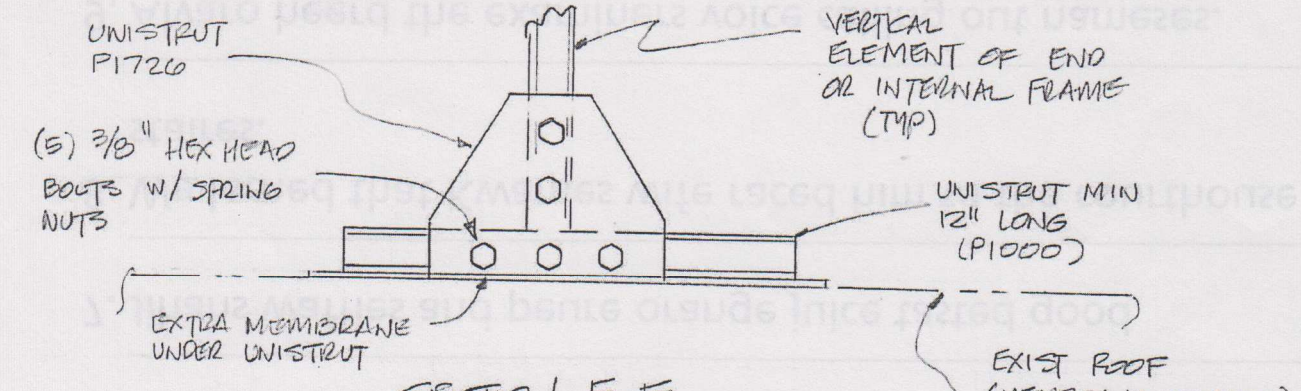
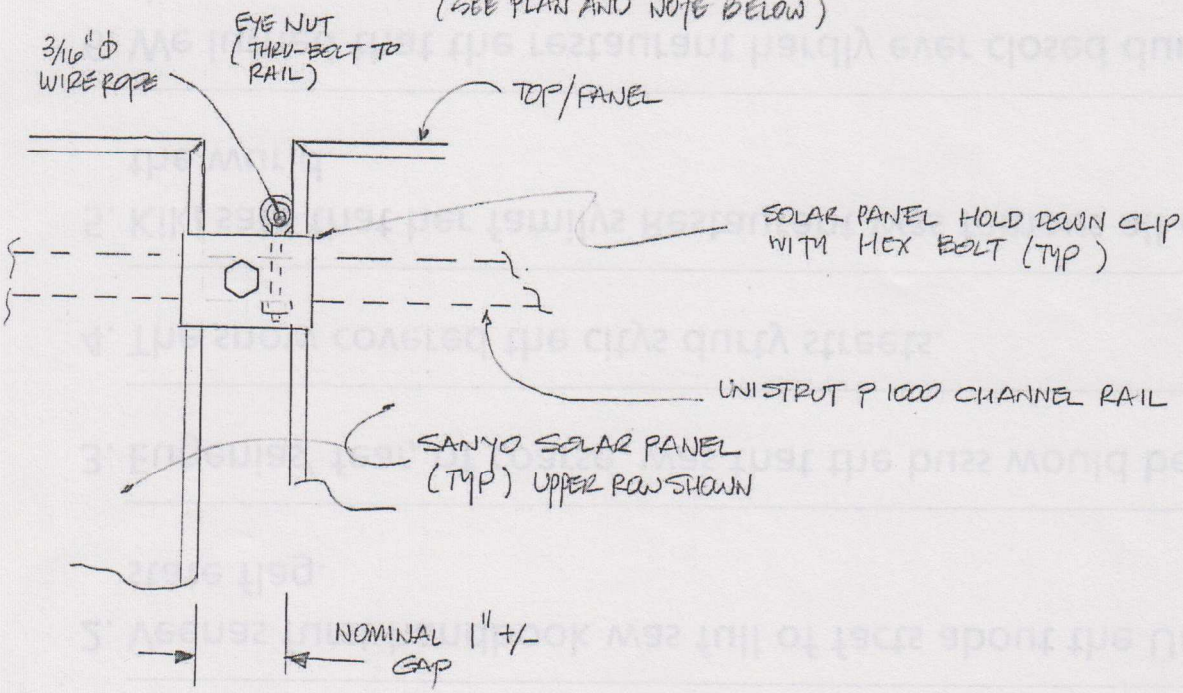


SECTION E-E

(SEE PLAN AND NOTE BELOW)



DETAIL #3

(SEE SECT. B-B)

BOTTOM EAST-WEST BRACES NEEDED AT EACH SHORT VERTICAL LEG OF END AND INTERNAL FRAMES (TOTAL OF 10) AND AT THREE LONG VERTICAL LEGS OF THREE EASTERN FRAMES (END + FIRST TWO INTERNAL) → TOTAL OF 13

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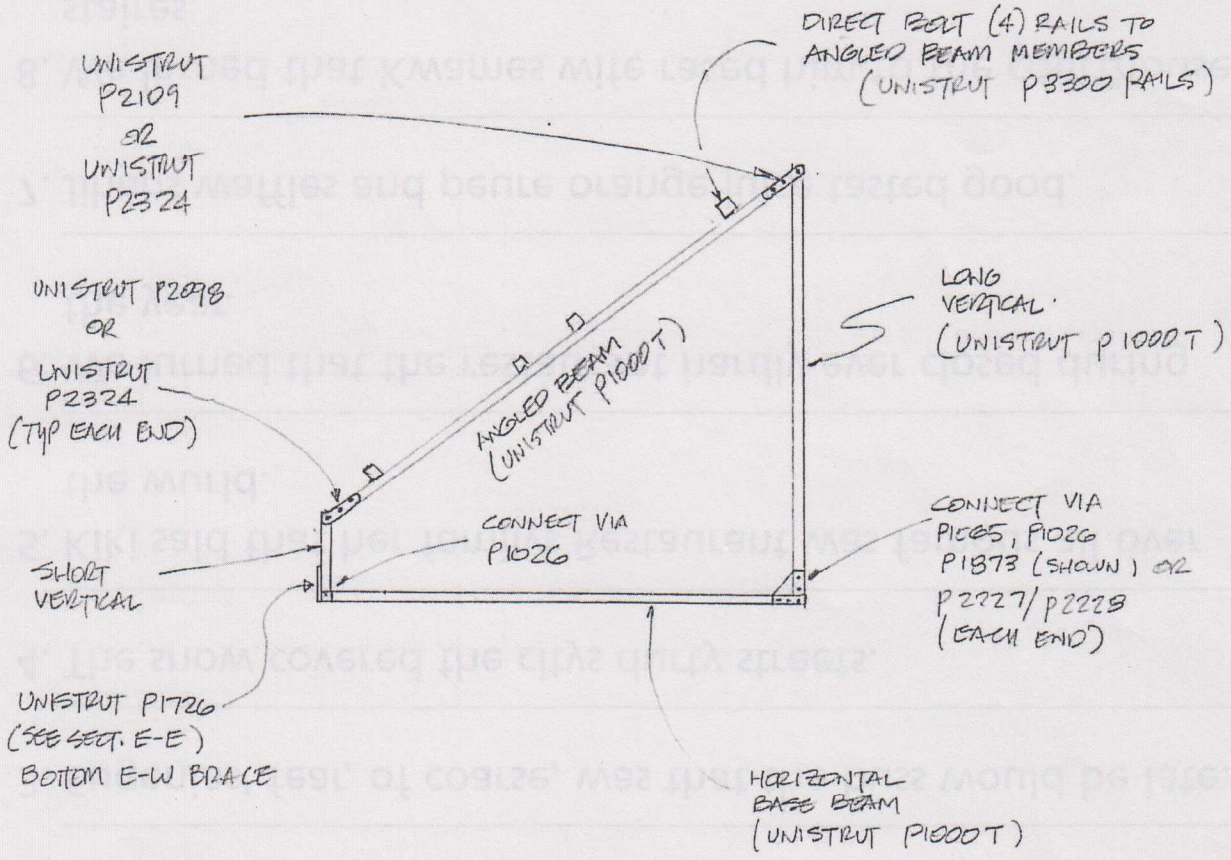

TYPICAL END FRAME OR INTERNAL FRAME (MOUNT TO PENTHOUSE NOT SHOWN)

TOTAL OF (10) FRAMES

NOTES

1. VERTICAL LOADS FROM NEW INSTALLATION WILL BE CARRIED BY UNDERLYING (4) 2x10 HEADER BEAM RUNNING EAST-WEST AND EXISTING 2x8 (REAL) AT 18" OC RUNNING NO-SOUTH. ANY VERTICAL LOADS FROM COUPLED HORIZONTAL LOADS WILL ALSO BE CARRIED.
2. LATERAL LOADS FROM SOLAR SYSTEM WILL BE CARRIED BY EXISTING PENTHOUSE AND (2) WIRE ROPE SYSTEMS SPANNING BETWEEN EXISTING PARAPETS.